

IN THE CLAIMS

1-22. (Cancelled)

23. (New) Mixed ester of hyaluronic acid wherein hydroxyl groups of hyaluronic acid are partially esterified with retinoic acid and butyric acid molecules, characterized in that the ratio between the degree of substitution of said hyaluronic with butyric acid and the degree of substitution with retinoic acid is at least 6.

24. (New) The ester according to claim 23, wherein said ratio is at least 10.

25. (New) The ester according to claim 23, wherein the degree of substitution of hyaluronic acid with butyric acid ranges between 0.05 and 1.0 and the degree of substitution with retinoic acid ranges from 0.002 to 0.1.

26. (New) The ester according to claim 25, wherein the degree of substitution with butyric acid ranges between 0.1 and 0.35 and the degree of substitution with retinoic acid ranges between 0.01 and 0.05.

27. (New) The ester according to claim 23, wherein the average molecular weight (MW) of hyaluronic acid ranges from 10,000 to 30,000 Da.

28. (New) A pharmaceutical composition comprising as the active ingredient the mixed ester of hyaluronic acid of claim 23.

29. (New) A process for preparation of a mixed ester according to claim 23, comprising an esterification step of hyaluronic acid with retinoic acid carried out before the esterification with butyric acid derivatives.

30. (New) The process according to claim 29, comprising the following steps:

i) formation of an alcoholate of hyaluronic acid;

- ii) esterification of the alcoholate obtained in i) with retinoic acid derivatives to obtain a retinoic monoester of hyaluronic acid;
 - iii) esterification of the monoester obtained in ii) with butyric acid derivatives to obtain the aforesaid mixed ester of hyaluronic acid.
31. (New) The process according to claim 30, wherein the hyaluronic acid is used as a quaternary ammonium salt.
32. (New) The process according to claim 30, wherein in step i) the pH of the reaction environment is at least 13.
33. (New) The process according to claim 30, wherein the esterification reaction according to step ii) is carried out using retinoyl chloride as esterifying agent.
34. (New) The process according to claim 30, wherein the esterification reaction as in point iii) is carried out using butyric anhydride as esterifying agent.
35. (New) The mixed ester of hyaluronic acid having both a cytostatic and a pro-differentiating activity obtainable according to the process of claim 29.
36. (New) Pharmaceutical composition, carrying as the active principle at least one of the esters according to claim 35 in combination with pharmacologically acceptable excipients and/or diluents.
37. (New) Pharmaceutical composition according to claim 28, in the form of solution, suspension, soluble powder, granule, soft or rigid capsule, micro-capsule, tablet, coated tablet, suppositories, ovuli, ointment, gel.
38. (New) A method to induce the re-expression of surface antigens CD11a and CD11b on a cell by using the mixed ester according to claim 23.

39. (New) A therapeutic method for the treatment of diseases characterized by cellular hyper-proliferation in a subject in need of such a treatment, comprising administering to said subject a therapeutically effective amount of the antiproliferative and prodifferentiating mixed esters of the invention according to claim 23 or 35 at therapeutically active doses.
40. (New) The method according to claim 39 wherein the diseases are inflammatory disease and tumors.
41. (New) The method according to claim 40 wherein said inflammatory diseases are: inflammatory bowel diseases, Crohn's disease, ulcerative colitis, psoriasis, hyperkeratosis, prostatic hyperplasia, synovial cell proliferation.
42. (New) The method according to claim 40 wherein said tumors are solid or systemic tumors.
43. (New) The method according to claim 42 wherein said systemic tumors are: acute leukemia, acute promyelocytic leukemia, lymphomas, histiocytomas.